

TEDDY SURYA GUNAWAN



- KULLIYAH OF ENGINEERING
- IIUM Gombak Campus
- Email address:
tsgunawan@iium.edu.my

ACADEMIC QUALIFICATION

- Ph.D in Electrical Engineering
- Master in Engineering
- Bachelor in Electrical Engineering

TEACHING RESPONSIBILITIES

ADVANCED OPERATING SYSTEM	2015/2016 2016/2017 2017/2018 2018/2019 2019/2020
ADVANCED OPERATING SYSTEMS	2015/2016 2016/2017
CONTROL SYSTEMS	2007/2008 2008/2009 2009/2010 2010/2011 2011/2012 2012/2013 2013/2014 2014/2015 2015/2016 2017/2018
ELECTRIC CIRCUITS	2008/2009 2010/2011
ELECTRICAL AND COMPUTER ENGINEERING LAB III	2007/2008 2008/2009 2009/2010 2010/2011 2011/2012 2012/2013 2013/2014 2014/2015 2016/2017 2017/2018
ENGINEERING LAB I	2008/2009
FINAL YEAR PROJECT I	2018/2019 2019/2020
FINAL YEAR PROJECT II	2018/2019
INTEGRATED DESIGN PROJECT	2013/2014 2014/2015
OBJECT ORIENTED PROGRAMMING FOR ENGINEERS	2009/2010
OPERATING SYSTEMS	2015/2016 2016/2017 2017/2018 2018/2019 2019/2020
Operating System	2018/2019 2019/2020
PARALLEL COMPUTING	2019/2020
PROJECT I	2010/2011 2011/2012 2012/2013
PROJECT II	2010/2011 2011/2012
SPEECH AND AUDIO PROCESSING	2016/2017 2017/2018 2018/2019 2019/2020

SPEECH AND IMAGE PROCESSING

2007/2008 2008/2009 2009/2010 2010/2011
2011/2012 2012/2013 2013/2014 2014/2015
2015/2016 2016/2017 2017/2018 2018/2019
2019/2020

Speech & Image Processing

2018/2019

RESEARCH PROJECTS

In Progress

- 2019 - Present** - Empirical Model for Volatile Organic Compound Selectivity Prediction of Polymer-based Acoustic Wave Sensor Array through Machine Learning Algorithm
- 2019 - Present** - The Analytical Study of Environment, Social and Governance (ESG) Data to Improve the Effectiveness of the National Sustainable Development Goals (SDG) Reporting Using Artificial Intelligence
- 2019 - Present** - Artificial Intelligence aided algorithm to improve the detection of severity of curve in scoliotic spine
- 2019 - Present** - Prototype Development of an Integrated Parental Perinatal Depression and Anxiety Monitoring Systems
- 2018 - Present** - Development of a novel particle-filter-based pose estimation algorithm incorporating inertial sensors fusion with vision data for augmented reality application on smartphones
- 2018 - Present** - Speech Emotion Recognition and Depression Prediction based on Speech Analysis using Deep Neural Networks
- 2017 - Present** - Analyses of Infodemiology among Parents with Chronic Disease Children in Malaysia for improved Public Health Informatics
- 2016 - Present** - Development of Novel Algorithm using Features of Respiratory Sounds Abnormalities for Detection of Lung Cancer
- 2016 - Present** - Reduced-reference Metric Video Quality Metric using Spatial Information in Salient Regions
- 2015 - Present** - Improving Prediction of Sukuk Rating through Ensemble Classifier Techniques of Data Mining
- 2015 - Present** - Novel model of leakage current mechanisms in radiation hard Silicon Carbide Schottky Diodes
- 2015 - Present** - Proposing with Analysis a Multi-Level Inverter Using Optimized Pulse-Width-Modulation Approach with Reduced Harmonics and Switching Losses
- 2015 - Present** - The Investigation on Arabic Word Pose Estimation Algorithm as Marker for Augmented Reality Application

Completed

- 2016 - 2019** - Investigation of Novel Algorithm using Features of Respiratory Sounds Abnormalities for Detection of Lung Cancer

- 2016 - 2019** Real-Time Data Retrieval and Sorting System for the IoT
- 2016 - 2019** Reduced-reference Metric Video Quality Metric using Spatial Information in Salient Regions
- 2016 - 2018** Investigation on the Behaviour of Weapon Positioning System on Volatile Warship
- 2016 - 2017** An Effective Hybrid Human Gait Recognition System Combining Independent Component Analysis and Total Silhouette Computation
- 2015 - 2019** Improving Prediction of Sukuk Rating through Ensemble Classifier Techniques of Data Mining
- 2015 - 2019** Proposing with Analysis a Multi-Level Inverter Using Optimized Pulse-Width-Modulation Approach with Reduced Harmonics and Switching Losses
- 2015 - 2019** The Investigation on Arabic Word Pose Estimation Algorithm as Marker for Augmented Reality Application
- 2015 - 2018** An Efficient Algorithm on Lossless Audio Compression using Optimized Linear Predictor and Entropy Coding for Multichannel Quranic Audio Recitation
- 2015 - 2018** Novel model of leakage current mechanisms in radiation hard Silicon Carbide Schottky Diodes
- 2014 - 2016** Cardioid Based Graph ECG Biometric Recognition Incorporating Physiological Variability
- 2014 - 2019** An Efficient Algorithm to Discover Large and Frequent Itemset in High Dimensional Data
- 2014 - 2017** Novel Method for Building Ancient Recombination Landscape using Archaic Human Genomes
- 2014 - 2017** Study of Photoplethysmogram Based Biometric Identification Incorporating Different Age Groups and Physiological Conditions
- 2014 - 2016** Design and Development of Portable Classroom Attendance System Based on Fingerprint Biometric
- 2012 - 2015** Robust adaptive control of nonlinear system application to flight control system
- 2011 - 2013** Bimodal Person Identification System Based on Speech and Signature Recognitions
- 2011 - 2015** An Exploratory Study of Attitudes to ICT-related Environmental Issues and Initiatives among Students and Staff in Malaysian and Australian Higher Education Institutions (HEIs)
- 2011 - 2011** Development of Final Year Project Portal for Engineering Degree Program
- 2011 - 2015** Development Of SQL And PLSQL Programming Workbook For Database Courses Using Islamic Scenario
- 2011 - 2014** The Investigation of Location-based Query Implementation on Aid Distribution System During Disaster Recovery

- 2011 - 2013** Design and Develop A Prototype of Environment Friendly Hybrid
- 2010 - 2012** Design and implementation of novel parallel speech processing algorithms on a multicore system
- 2010 - 2013** Novel Algorithms on Speech and Audio Coding Based on Compressive Sensing Principle
- 2010 - 2012** Development of Embedded system for remote operation of CNC milling
- 2009 - 2011** Development of fast mode Decision Algorithm for Efficient scalable video coding
- 2008 - 2010** Adaptive Video Coding Over Wireless Channel

PUBLICATIONS

Article

- 2020** [Design of travel angle control of quanser bench-top helicopter using mamdani-based fuzzy logic controller.](#) Indonesian Journal of Electrical Engineering and Computer Science , 17 (2) pp.815-824
- 2020** [Safety and security solution for school bus through RFID and GSM technologies.](#) Safety and security solution for school bus through RFID and GSM technologies , 17 (2) pp.804-814
- 2020** [An efficient algorithm for cardiac arrhythmia classification using ensemble of depthwise Separable convolutional neural networks.](#) Applied Sciences , 10 (2) pp.483-499
- 2019** [Investigation of lower limb's muscles activity during performance of salat between two age groups.](#) Indonesian Journal of Electrical and Computer science , 14 (2) pp.608-617
- 2019** [A Comparative study of total harmonics distortion between Spwm and She-Pwm modulation techniques for inverters..](#) Journal of Electrical Power and Electronics System , 1 (1) pp.1-5
- 2019** [A novel optimization harmonic elimination technique for cascaded multilevel inverter.](#) Bulletin of Electrical Engineering and Informatics , 8 (2) pp.405-413
- 2019** [The disruptometer: an artificial intelligence algorithm for market insights.](#) Bulletin of Electrical Engineering and Informatics , 8 (2) pp.727-734
- 2019** [A critical insight into multi-languages speech emotion databases.](#) Bulletin of Electrical Engineering and Informatics , 8 (4) pp.1312-1323
- 2019** [On the use of voice activity detection in speech emotion recognition.](#) Bulletin of Electrical Engineering and Informatics , 8 (4) pp.1324-1332
- 2019** [Cyberbullying in e-learning platform: an exploratory study through text mining analytics.](#) Journal of Information Systems and Digital Technologies , 1 (2) pp.40-47

- 2018** [Development of Quran reciter identification system using MFCC and GMM classifier.](#) International Journal of Electrical and Computer Engineering (IJECE) , 8 (1) pp.372-378
- 2018** [Performance evaluation of multichannel audio compression.](#) Indonesian Journal of Electrical Engineering and Computer Science , 10 (1) pp.146-153
- 2018** [Comparison of entropy coding mechanism on IEEE1857.2 lossless audio compression standard.](#) Indonesian Journal of Electrical Engineering and Computer Science , 10 (1) pp.176-183
- 2018** [On the comparison of line spectral frequencies and mel-frequency cepstral coefficients using feedforward neural network for language identification.](#) Indonesian Journal of Electrical Engineering and Computer Science , 10 (1) pp.168-175
- 2018** [Measuring the road traffic intensity using neural network with computer vision.](#) Indonesian Journal of Electrical Engineering and Computer Science , 10 (1) pp.184-190
- 2018** [Development of quranic reciter identification system using MFCC and GMM classifier.](#) International Journal of Electrical and Computer Engineering , 8 (1) pp.372-378
- 2018** [Design of microstrip hairpin bandpass filter for 2.9 GHz – 3.1 GHz Sband radar with defected ground structure.](#) Malaysian Journal of Fundamental and Applied Science , 14 (4 (October-December)) pp.448-455
- 2018** [A review on emotion recognition algorithms using speech analysis.](#) Indonesian Journal of Electrical Engineering and Informatics (IJEEI) , 6 (1) pp.12-20
- 2018** [Design and implementation of portable outdoor air quality measurement systemn using Arduino.](#) International Journal of Electrical and Computer Engineering (IJECE) , 8 (1) pp.280-290
- 2018** [Decision tree optimization for sukuk rating prediction.](#) Journal of Fundamental and Applied Science , 10 (25) pp.323-332
- 2018** [Development of smart chicken poultry farm.](#) Indonesian Journal of Electrical Engineering and Computer Science , 10 (2) pp.498-505
- 2018** [Implementation of fuzzy logic control system on rotary car parking system prototype.](#) Indonesian Journal of Electrical Engineering and Computer Science , 12 (2) pp.706-715
- 2018** [On the use of edge features and exponential decaying number of nodes in the hidden layers for handwritten signature recognition.](#) Indonesian Journal of Electrical Engineering and Computer Science , 12 (2) pp.722-728
- 2018** [Penetration testing using Kali Linux: SQL injection, XSS, Wordpress, and WPA2 attacks.](#) Indonesian Journal of Electrical Engineering and Computer Science , 12 (2) pp.729-737
- 2018** [Speech emotion recognition using deep feedforward neural network.](#) Indonesian Journal of Electrical Engineering and Computer Science , 10 (2) pp.554-561

- 2018** [Concealment of files blocked by Gmail with EOF-based image steganography.](#) Indonesian Journal of Electrical Engineering and Computer Science , 12 (2) pp.716-721
- 2018** [Development of English handwritten recognition using deep neural network.](#) Indonesian Journal of Electrical Engineering and Computer Science , 10 (2) pp.562-568
- 2018** [Sukuk rating prediction using voting ensemble strategy.](#) International Journal of Electrical and Computer Engineering (IJECE) , 8 (1) pp.299-304
- 2018** [On the review and setup of security audit using Kali Linux.](#) Indonesian Journal of Electrical Engineering and Computer Science , 11 (1) pp.51-59
- 2018** [Design of microstrip hairpin bandpass filter for 2.9 GHz - 3.1 GHz s-band radar with defected ground structure.](#) Malaysian Journal of Fundamental and Applied Sciences (MJFAS) , 14 (4) pp.448-455
- 2018** [Classification of normal and crackles respiratory sounds into healthy and lung cancer groups.](#) International Journal of Electrical and Computer Engineering (IJECE) , 8 (3) pp.11530-1538
- 2018** [Performance evaluation of smart home system using Internet of things.](#) International Journal of Electrical and Computer Engineering (IJECE) , 8 (1) pp.400-411
- 2017** [Design of automatic number plate recognition on android smartphone platform.](#) Indonesian Journal of Electrical Engineering and Computer Science , 5 (1) pp.99-108
- 2017** [Digital photography based food intake prediction using artificial neural network.](#) Malaysian Journal of Medicine , 72 (Supplement 1) pp.20-20
- 2017** [Edge detection of MRI images using artificial neural network.](#) The Medical Journal of Malaysia , 72 (Supplement 1) pp.22-22
- 2017** [Evaluating the effect of viewing angle in different conditions for gait recognition.](#) ARPN Journal of Engineering and Applied Sciences , 12 (16) pp.4729-4735
- 2017** [Prototype design of smart home system using internet of things.](#) Indonesian Journal of Electrical Engineering and Computer Science , 7 (1) pp.107-115
- 2017** [Development of efficient iris identification algorithm using wavelet packets for smartphone application.](#) Indonesian Journal of Electrical Engineering and Computer Science , 8 (2) pp.450-456
- 2017** [Development of photo forensics algorithm by detecting photoshop manipulation using error level analysis.](#) Indonesian Journal of Electrical Engineering and Computer Science , 7 (1) pp.131-137
- 2017** [Development of face recognition on raspberry Pi for security enhancement of smart home system.](#) Indonesian Journal of Electrical Engineering and Informatics (IJEI) , 5 (4) pp.317-325
- 2017** [Artificial neural network based fast edge detection algorithm for MRI medical images.](#) Indonesian Journal of Electrical Engineering and Computer Science , 7 (1) pp.123-130

- 2017** [Performance evaluation of automatic number plate recognition on android smartphone platform.](#) International Journal of Electrical and Computer Engineering , 7 (3) pp.1941-1951
- 2017** [Single channel speech enhancement using Wiener filter and compressive sensing.](#) International Journal of Electrical and Computer Engineering (IJECE) , 7 (3) pp.1941-1951
- 2017** [Development of language identification using line spectral frequencies and learning vector quantization networks.](#) Journal of Telecommunication, Electronic and Computer Engineering , 9 (3-7) pp.21-27
- 2017** [Development of educational game for primary school mathematics using Microsoft Kinect.](#) Indonesian Journal of Electrical Engineering and Computer Science , 6 (2) pp.457-463
- 2017** [Investigation of lossless audio compression using IEEE 1857.2 advanced audio coding.](#) Indonesian Journal of Electrical Engineering and Computer Science , 6 (2) pp.422-420
- 2017** [A dynamic bandwidth schemes base on adaptive video streaming.](#) Transylvanian Review , XXV (22) pp.5709-5718
- 2017** [Survey on language processing algorithm for sign language synthesizer.](#) International Journal on Robotics and Mechatronics , 4 (2) pp.39-49
- 2016** [Fingerprint biometric systems.](#) Trends in Bioinformatics , 9 (2) pp.52-58
- 2016** [Travel angle control of quanser bench-top helicopter based on quantitative feedback theory technique.](#) Indonesian Journal of Electrical Engineering and Computer Science , 1 (2) pp.310-318
- 2016** [QFT controller for nonlinear system application to 3-DOF flight control module.](#) ARPN Journal of Engineering and Applied Sciences , 11 (6) pp.4172-4175
- 2016** [Possibility of using interdigital sensor \(IDS\) in estimating different level of blood glucose.](#) Sindh University Research Journal (Science Series) , 48 (4D) pp.209-212
- 2016** [Development of Quran reciter identification system using MFCC and neural network.](#) TELKOMNIKA Indonesian Journal of Electrical Engineering , 17 (1) pp.168-175
- 2016** [Speech enhancement based on wiener filter and compressive sensing.](#) Indonesian Journal of Electrical Engineering and Computer Science , 2 (2) pp.367-379
- 2016** [Review of parameter estimation techniques for time-varying autoregressive models of biomedical signals.](#) International Journal of Signal Processing Systems , 4 (3) pp.220-225
- 2016** [Portable anti forgery recognition for attendance system using fingerprint based biometric.](#) ARPN Journal of Engineering and Applied Sciences , 11 (1) pp.396-403
- 2015** [Robust control of bench-top helicopter using quantitative feedback theory.](#) TELKOMNIKA Indonesian Journal of Electrical Engineering , 14 (3) pp.500-507
- 2015** [Performance comparisons between PID and adaptive PID controllers for travel angle control of a bench-top helicopter.](#) International Journal of Electronics, Electrical and Communication Engineering , 9 (1) pp.35-40

- 2014** [Green IT attitude and behaviour in higher education institution: a gender perspective.](#) Journal of Applied Sciences , 14 (7) pp.714-718
- 2013** [Towards a sign language synthesizer: a bridge to communication gap of the hearing/speech impaired community.](#) IOP Conference Series: Materials Science and Engineering , 53 pp.012072 (1)-012072 (7)
- 2013** [Wavelet cesprtral coefficients for isolated speech recognition.](#) TELKOMNIKA Indonesian Journal of Electrical Engineering , 11 (5) pp.2731-2738
- 2013** [Human gait recognition and classification using similarity index for various conditions .](#) IOP Conference Series: Materials Science and Engineering , 53 (Conf.1) pp.012069-1
- 2013** [Development of portable automatic number plate recognition system on android mobile phone.](#) IOP Conference Series: Materials Science and Engineering , 53 (012066) pp.1-10
- 2013** [Speech enhancement based on compressive sensing algorithm.](#) IOP Conference Series: Materials Science and EngineeringEmail alert RSS feed , 53 pp.012076
- 2012** [Development of low bit rate speech encoder based on vector quantization and compressive sensing.](#) Journal of Applied Sciences pp.1-11
- 2012** [Modelling and control of laboratory scale conveyor belt type grain dryer plant .](#) Journal of Food, Agriculture & Environment , 10 (2) pp.1384-1388
- 2012** [Parallelization of speech compression based algorithm based on human auditory system on multicore system.](#) Journal of Applied Sciences , 12 (4) pp.375-380
- 2012** [Development of a electrically inspired low emission microcontroller based hybrid vehicle.](#) American Journal of Applied Sciences , 9 (10) pp.1729-1735
- 2011** [Low bit rate video coding for remote desktop operation of CNC milling .](#) Advanced Materials Research , 264 pp.1631-1636
- 2011** [Multilayers fast mode decision algorithms for scalable video coding .](#) Australian Journal of Basic and Applied Sciences , 5 (12) pp.3209-3216
- 2010** [Forward masking threshold estimation using neural networks and its application to parallel speech enhancement.](#) IIUM Engineering Journal , 11 (1) pp.15-26
- 2010** [Complexity evaluation in scalable video coding.](#) Advances Multimedia - an International Journal (AMIJ) , 1 (1) pp.12-25
- 2010** [Perceptual speech enhancement exploiting temporal masking properties of human auditory system.](#) Speech Communication , 52 (5) pp.381-393
- 2009** [New approach of hidden data in the portable executable file without change the size of carrier file using statistical technique.](#) International Journal of Computer Science and Network Security (IJCSNS) , 9 (7) pp.218-224
- 2009** [Novel framework for hidden data in the image page within executable file using computation between advanced encryption standard and distortion techniques.](#) International Journal of Computer Science and Information Security , 3 (1) pp.1-6
- 2007** [SMaTTS: standard malay text to speech system.](#) International Journal of Electrical and Computer Engineering , 4 (2) pp.285-293

Conference or Workshop Item

- 2019 [Mobile application for Halal food ingredients identification using optical character recognition.](#) In: **2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)**
- 2019 [Mamdani-based fuzzy logic controller for travel angle control of bench-top helicopter.](#) In: **2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)**
- 2019 [Food intake calorie prediction using generalized regression neural network.](#) In: **2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)**
- 2019 [Feature selection for financial data classification: Islamic finance application.](#) In: **2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)**
- 2019 [Performance evaluation for SE 113 flow control system plant using self-tuning fuzzy PI controller.](#) In: **5th IEEE International Conference on Smart Instrumentation, Measurement and Application (ICSIMA 2018)**
- 2018 [Development of air quality measurement system using raspberry Pi.](#) In: **2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)**
- 2018 [Performance evaluation for SE113 flow control system plant using self-tuning fuzzy PI controller.](#) In: **2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)**
- 2018 [Kinematic analysis of rotary car parking system mechanism.](#) In: **4th IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2017**
- 2018 [A systematic approach for developing course learning outcomes to fulfill accreditation requirements in Malaysia.](#) In: **7th World Engineering Education Forum 2017**
- 2018 [Nonstationary signal reconstruction from TVAR coefficients.](#) In: **4th IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2017**
- 2018 [Investigation of lower limb's muscle activity during performance of solat between two groups.](#) In: **4th International Conference on Electronic Design(ICED 2018)**
- 2018 [Development of offline handwritten signature authentication using artificial neural network.](#) In: **International Conference on Computing, Engineering, and Design (ICCED 2017)**
- 2018 [Online information seeking behavior for cancer related disease: A developed and developing country comparison.](#) In: **International Conference on Computing, Engineering, and Design (ICCED) 2017**
- 2018 [Development of school bus security system based on RFID and GSM technologies for Klang Valley Area.](#) In: **2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)**

- 2018 [Development of power factor meter using Arduino.](#) In: **2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)**
- 2018 [Analysis of adaptive video streaming for users with demand heterogeneity.](#) In: **4th IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA) 2017**
- 2018 [Effect of duty cycle on THD for multilevel inverter based on selective harmonic elimination technique.](#) In: **2018 7th International Conference on Computer Communication Engineering (ICCCE2018)**
- 2017 [Investigation of various algorithms on multichannel audio compression.](#) In: **2017 IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA 2017)**
- 2017 [Development of modular smart farm system.](#) In: **4th IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA) 2017**
- 2017 [Development of language identification system using MFCC and vector quantization.](#) In: **4th IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA) 2017**
- 2017 [Refined adaptive video quality demands over heterogeneous networks.](#) In: **4th IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA) 2017**
- 2017 [A comparative study between SPWM and SHE-PWM modulation techniques for DC-AC inverters.](#) In: **IEEE 3rd International Conference on Engineering, Technologies and Social Sciences 2017 (ICETSS-2017)**
- 2017 [Miniaturized water flow and level monitoring system for flood disaster early warning.](#) In: **IOP Conf. Series: Materials Science and Engineering 260 (2017)**
- 2017 [Selective harmonics elimination technique in single phase unipolar H-bridge inverter.](#) In: **14th Student Conference on Research and Development, IEEE (SCoReD2016)**
- 2017 [Traffic intensity monitoring using multiple object detection with traffic surveillance cameras.](#) In: **2017 IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA 2017)**
- 2017 [Performance analysis of IEEE 1857.2 lossless audio compression linear predictor algorithm.](#) In: **4th IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA) 2017**
- 2017 [The development of a smart food container for balanced diet intake.](#) In: **5th Asia Pacific Conference on Public Health Supplement 2017**
- 2017 [Development of fuzzy logic controller for Quanser bench-top helicopter.](#) In: **6th International Conference on Mechatronics (ICOM'17)**
- 2017 [A review of lossless audio compression standards and algorithms.](#) In: **International Conference on Electrical and Electronic Engineering 2017 (IC3E2017)**

- 2017 [Design and development of wireless PPG data acquisition for health monitoring application using bluetooth module.](#) In: **14th Student Conference on Research and Development, IEEE (SCORED2016)**
- 2017 [Low altitude balloon IoT tracker.](#) In: **4th IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA) 2017**
- 2016 [Speech enhancement in non-stationary noise using compressive sensing.](#) In: **6th International Conference on Computer and Communication Engineering (ICCCE 2016)**
- 2016 [An activity monitoring system for senior citizens living independently using capacitive sensing technique.](#) In: **Conference Record - IEEE Instrumentation and Measurement Technology Conference**
- 2016 [Effect of modulation index of pulse width modulation inverter on total harmonic distortion for sinusoidal.](#) In: **International Conference on Intelligent Systems Engineering**
- 2016 [Modulation optimization effect on total harmonic distortion of single phase H-bridge inverter based selective harmonics E limination technique.](#) In: **6th International Conference on Computer and Communication Engineering (ICCCE 2016)**
- 2016 [On the characteristics of various Quranic recitation for lossless audio coding application.](#) In: **6th International Conference on Computer and Communication Engineering (ICCCE 2016)**
- 2014 [Self-tuning deadbeat PD controller for pitch angle control of a bench-top helicopter.](#) In: **5th International Conference on Computer and Communication Engineering (ICCCE 2014)**
- 2014 [Wireless power transmission system based on magnetic inductive resonance of couple circuit.](#) In: **International Conference on Computer and Communication Engineering (ICCCE2014)**
- 2014 [S-Rater: data mining application in Islamic financial sector.](#) In: **2014 5th International Conference on Information and Communication Technology for The Muslim World (ICT4M 2014)**
- 2014 [Qualitative analysis on watermarking algorithm for large resolution camera phone image.](#) In: **5th International Conference on Computer and Communication Engineering (ICCCE2014)**
- 2014 [Complexity algorithm analysis for edit distance.](#) In: **5th International Conference on Computer and Communication Engineering (ICCCE2014)**
- 2014 [Evaluation of various leakage current paths with different switching conditions.](#) In: **5th International Conference on Computer and Communication Engineering (ICCCE2014)**
- 2014 [A comparative analysis of QRS and cardioid graph based ECG biometric recognition in different physiological conditions.](#) In: **IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA2014)**

- 2014 [Development of robust quantitative feedback theory controller for quanser bench-top helicopter.](#) In: **IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA 2014)**
- 2014 [Robust adaptive LQR control of nonlinear system application to 3-Dof flight control system.](#) In: **IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA 2014)**
- 2014 [Improvement of wiener filter based speech enhancement using compressive sensing.](#) In: **IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA 2014)**
- 2014 [Evaluation of the effect of walking speeds on human gait recognition.](#) In: **IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA 2014)**
- 2014 [Design and development of portable classroom attendance system based on arduino and fingerprint biometric.](#) In: **5th International Conference on Information and Communication Technology for The Muslim World (ICT4M 2014)**
- 2014 [Word classification for sign language synthesizer using hidden Markov model.](#) In: **5th International Conference on Information & Communication Technology for The Muslim World (ICT4M 2014)**
- 2014 [Human gait recognition: viewing angle effect on normal walking pattern.](#) In: **5th International Conference on Computer and Communication Engineering (ICCE 2014)**
- 2013 [Development of portable automatic number plate recognition system on android mobile phone.](#) In: **5th International Conference on Mechatronics (ICOM'13)**
- 2013 [Gait recognition and effect of noise on the recognition rate.](#) In: **IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA)**
- 2013 [A conceptual framework for assessing electronic banking continued use.](#) In: **2013 8th International Conference on Information Technology in Asia (CITA)**
- 2013 [Human gait recognition and classification using similarity index for various conditions.](#) In: **5th International Conference on Mechatronics (ICOM'13)**
- 2013 [Speech enhancement based on compressive sensing algorithm.](#) In: **International Conference on Mechatronics (ICOM'03)**
- 2013 [Objective evaluation of speech enhancement using compressive sensing algorithm.](#) In: **2013 IEEE International Conference on Smart Instrumentation, Measurement, and Applications**
- 2013 [Assessment of e-commerce adoption benefits by Indonesian women entrepreneurs.](#) In: **The 4th International Conference on Information & Communication Technology for the Muslim World (ICT4M)**
- 2013 [Optimization of ANPR algorithm on android mobile phone.](#) In: **2013 International Conference on Smart Sensor, Measurement, and Applications**

- 2013 [Development of high quality speech compression system for Quranic recitation based on modified CELP algorithm .](#) In: **Proceedings of IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA)**
- 2013 [Framework for logistics coordination and distribution mobile application in disaster management.](#) In: **International Conference on Advanced Computer Science Applications and Technologies 2013**
- 2013 [Development of portable charger for mobile phone using arduino microcontroller during disaster recovery .](#) In: **International Conference on Advanced Computer Science Applications and Technologies 2013**
- 2013 [Properties of digital image watermarking.](#) In: **IEEE 9th International Colloquium on Signal Processing and its Applications**
- 2012 [Automatic person identification system using handwritten signatures .](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2012)**
- 2012 [Voice based automatic person identification system using vector quantization.](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2012)**
- 2012 [Wavelet cepstral coefficients for isolated speech recognition.](#) In: **International Conference on Interactive Digital Media**
- 2012 [Compressive sensing based low bit rate speech encoder.](#) In: **International Conference on Computer and Communication Engineering, ICCCE 2012**
- 2012 [A development of self-tuning quantitative feedback theory.](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2012)**
- 2012 [Evaluation of sparsifying algorithms for speech signals.](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2012)**
- 2012 [Parallel implementation of genomic sequences classification using modified gabor wavelet transform on multicore systems.](#) In: **International Conference on Biomedical Engineering (ICoBE2012)**
- 2012 [Development of web application for Muslim traveller with emphasis on social networking.](#) In: **International Conference on Computing and Information Technology (ICCIT 2012)**
- 2012 [Design and implementation of automatic number plate recognition on android platform.](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2012)**
- 2012 [Design of environmental friendly hybrid electric vehicle.](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2012)**
- 2012 [Virtual-learning Content Management System for Problem-Based Learning \(PBL\) courses.](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2012)**
- 2011 [Development of FYP online system for outcome based education.](#) In: **IEEE Region Ten Conference (TENCON 2011)**

- 2011 [Speech compression using compressive sensing on a multicore system.](#) In: **4th International Conference on Mechatronics (ICOM 2011)**
- 2010 [Haji crowd simulation based on intelligent agent.](#) In: **of International Conference on Computer and Communication Engineering ICCCE 2010**
- 2010 [Fast mode decision for scalable video coding over wireless network.](#) In: **International Conference on Computer and Communication Engineering ICCCE 2010**
- 2010 [English digits speech recognition system based on Hidden Markov Models.](#) In: **International Conference on Computer and Communication Engineering ICCCE 2010**
- 2010 [PC sound card based instrumentation and control.](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2010), 11-13 May 2010, Kuala Lumpur, Malaysia**
- 2009 ["Stego-analysis chain, session two" novel approach of stego-analysis system for image file.](#) In: **2009 International Association of Computer Science and Information Technology - Spring Conference**
- 2009 ["Stego-Analysis Chain, Session One" investigations on steganography weakness Vs stego-analysis system for multimedia file .](#) In: **2009 International Association of Computer Science and Information Technology - Spring Conference**
- 2008 [The development of a forward masking model using neural networks and its application to speech enhancement.](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2008)**
- 2008 [On the optimal window shape for genomic signal processing.](#) In: **International Conference on Computer and Communication Engineering (ICCCE 2008)**
- 2008 [Video streaming over wireless LAN using scalable extension of H.264/AVC.](#) In: **2008 International Conference on Electronic Design (ICED 2008)**
- 2007 [Higher-order statistics and neural network based multi-classifier system for gene identification.](#) In: **1st International Conference on Signal Processing and Communication Systems (ICSPCS 2007)**
- 2007 [A signal boosting technique for gene prediction.](#) In: **Proceeding of 6th International Conference on Information, Communications and Signal Processing (ICICS 2007)**

Book

- 2018 [Smart home system using internet of things: design, implementation and sample codes.](#) LAP Lambert Academic Publishing . ISBN 978-613-9-83980-3
- 2017 [Portable outdoor air quality measurement system using Arduino.](#) LAP LAMBERT Academic Publishing . ISBN 978-3-330-08717-0
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